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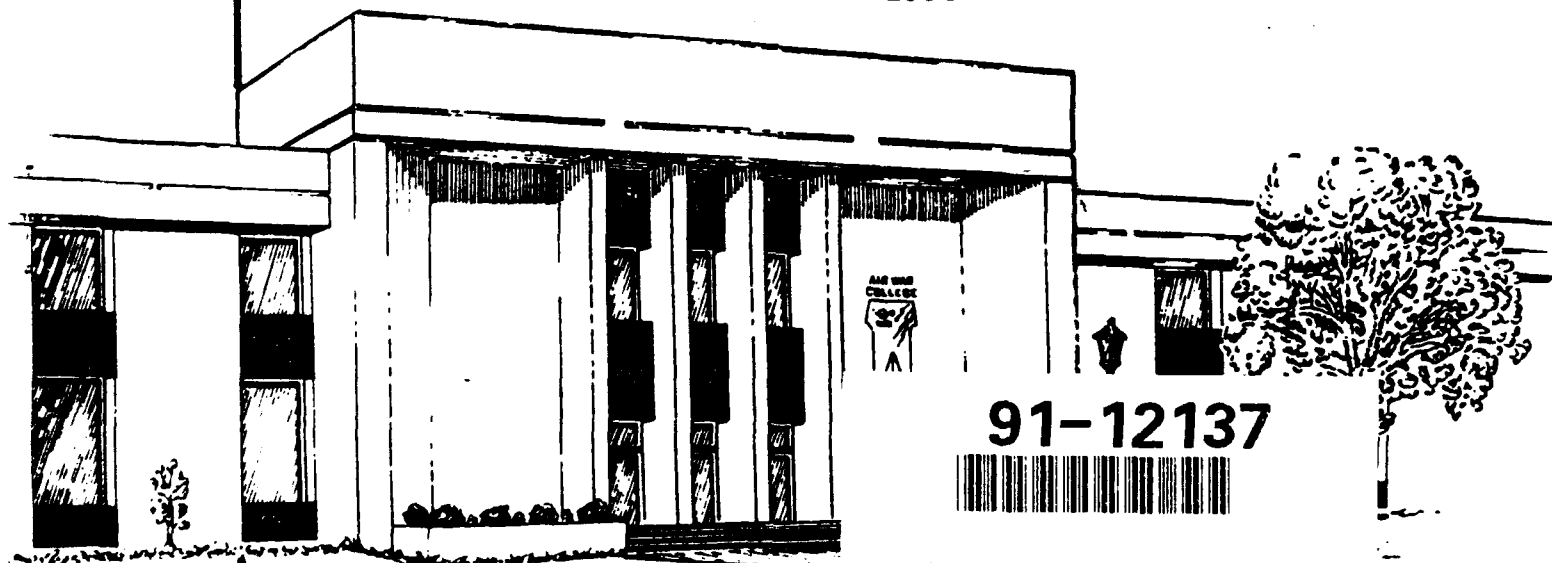
RESEARCH REPORT

WHAT ARE THE EFFECTS OF ARMS CONTROL ON
NORWAY AND NORTHERN WATERS?

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AIR UNIVERSITY
UNITED STATES AIR FORCE
MAXWELL AIR FORCE BASE, ALABAMA

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WHAT ARE THE EFFECTS OF ARMS CONTROL ON NORWAY
AND
NORTHERN WATERS?

by

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A DEFENSE ANALYTICAL STUDY SUBMITTED TO THE FACULTY
IN
FULFILLMENT OF THE CURRICULUM
REQUIREMENT

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MAXWELL AIR FORCE BAS, ALABAMA

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EXECUTIVE SUMMARY

Norway occupies a strategic position between the two superpowers. Her close proximity to the Soviet Union and the military bases on the Kola Peninsula make her territory attractive to both NATO and the Soviet Union. Buildups of the Soviet North Fleet and the naval base on Kola and the United States naval strategy of forward deployment, have increased the activity and the importance of northern waters. This increased importance of northern waters could challenge the Norwegian security policy.

Arms reduction could make Norwegian territory relatively more important for the Soviet Union to defend her interests on Kola and in northern waters and for the United States to project a threat to the Soviet interests in the area. 1) A reduction of strategic nuclear missile forces will focus on survivability. Northern waters offers excellent protection to Soviet submarines. A relative shift to SLBM could be the result of reducing the strategic nuclear missile forces. 2) The INF does not comprise sea launched intermediate nuclear missiles. Hence the elimination of land-based intermediate nuclear forces could cause a shift to sea launched nuclear missiles. START negotiations and the INF treaty could relatively increase the number of sea based strategic and intermediate nuclear forces which would relatively increase the activity and the importance of northern waters. Thus, Norway and her security policy would be affected.

NATO is a maritime alliance. The SLOCs between the US and

Europe are vital to NATO ensuring troops and supply to Europe. Arms reduction will increase the importance of secure and open SLOCs. 1) Arms control will reduce the number of US troops in Europe and hence increase the number of troops and equipment to be shipped to an European theater in a contingency. 2) Arms control will result in more equal military strength between NATO and the USSR on a lower level, and hence a war in Europe is most likely to be a prolonged war. SLOCs will be vital for NATO in a prolonged war. Norwegian territory is crucial to both parties for control of the Atlantic and is vital for NATO defending the SLOC.

Soviet buildup of the North Fleet to an ocean going fleet has increased the threat to the SLOCs. Norway and NATO should encourage a reduction of attack nuclear submarines which is a major threat to the SLOCs.

The increased activity and importance of northern waters and increased value of SLOCs to support a prolonged war in Europe, could challenge the Norwegian base policy. It could cause her to allow foreign troops on her territory in peace time, or cause a relative strengthening of her active defence to meet the Soviet challenge.

The ongoing democratization process in the Soviet Union and Eastern Europe will reduce the threat to Norway and NATO as a whole. However, the threat to North-Norway caused by increased importance of northern waters, will remain. This should cause a relative shift in Norwegian wartime planning to prioritize North-Norway.

Arms control eliminating the capability of surprise attack and massive attack will offer longer warning time. Hence, Norway could reduce some of her standing forces and reduce alert status of some of her then remaining standing forces. This would offer Norway the possibility to focus peace time military activity to war time planning and training and support to her mobilization forces.

BIOGRAPHICAL SKETCH

Lieutenant Colonel Reidar H. Furnes is a graduate from RNoAF Academy of 1968. He has served at the various operation levels to include battery commander at an anti aircraft battery and a NIKE Hercules battery. He also was chief of the operational group at the NIKE Hercules batallion in Norway. He has been attached to the Air Defence School and the Norwegian Defence Research Establishment. He is a graduate from the Swedish Army Staff and Technical College of 1977 (MS). Lieutenant Colonel Furnes is a graduate of the Air War College, class of 1990.

WHAT ARE THE EFFECTS ON ARMS CONTROL ON NORWAY
AND
NORTHERN WATERS?

Introduction

The main goal of arms control is to reduce the risk of war. In many discussions and writings about arms control equal level is considered the key to stability. It should be recalled that equality in strength is not necessarily a guarantee for peace. Many of the European wars were fought between essentially equal forces (2:86).

The ratification of the INF (Intermediate Nuclear Force) treaty proved that it is possible to achieve a real reduction in nuclear arms by arms control. It also showed that verification of the treaty by on-site inspection was possible to arrange. This gave new hope for arms control as a means for the reduction of strategic and conventional arms. Ongoing negotiations on a Strategic Arms Reduction Talks (START) treaty, Confidence and Security Building Measures (CSBM) and negotiations on Conventional Forces Europe (CFE) give hope for stability and hopefully peace in Europe. A peace still which is built on deterrence but the new openness could hinder a competitive security and replace it with security built on confidence and common interests.

The purpose of this study is to assess how an arms reduction effects the Norwegian security policy. Reductions on strategic nuclear forces, intermediate nuclear forces, theater based nuclear forces, chemical weapons and conventional forces will most certainly have different effects on Norwegian security policy and will be studied separately. To evaluate Norwegian security policy, the study will address questions on how arms reductions will effect Soviet forces and NATO forces in the northern areas and how this will effect the strategic position of Norway which again will effect the Norwegian security policy. The deterrence and the reassurance component of the Norwegian defence and security policy, would be addressed. The conclusions drawn are not very sensitive to the magnitude of reductions as long as the armed forces of the two parties offer deterrence and if deterrence fails none of the parties have an advantage over the other with surprise and sustained attack capabilities. However, this paper is based on proposals and agreements reached up to the end of 1989 by the two adversaries.

The INF treaty will be the basis for evaluating effects on INF elimination. The principles reached in Reykjavik between the US and the USSR in October 1986 will be the basis for effects of the START evaluation. CFE evaluation will be based on "the Directive for arms control" issued by the North Atlantic Council in Brussels 29 and 30 May 1989 and the proposals and agreements offered by President Reagan and General Secretary Gorbachev during the summer and autumn of 1989. An assessment will be made of the

effects reductions beyond the proposed levels will have, where these are considered to have effect on the Norwegian security policy.

A discussion of reduction of attack submarines and nuclear sea launched cruise missiles (SLCM), which should be favorable for both NATO, the US and the USSR, will be conducted.

Norway's strategic position between the US and the USSR (fig 1) makes her territory favorable for warning and defence against strategic attacks. Her territory is crucial for the Soviet Union to defend Soviets interests on the Kola Peninsula and northern waters and for projection of Soviet maritime forces to

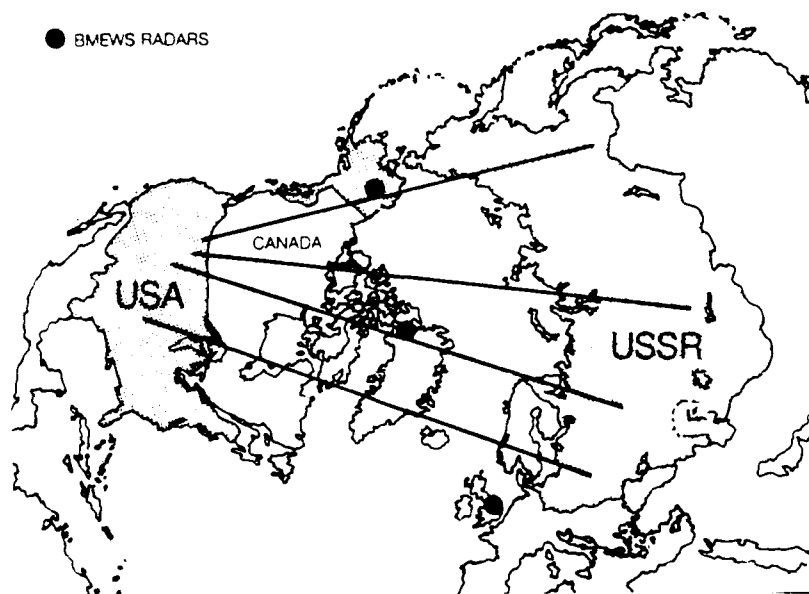


Figure 1: Soviet ICBM trajectories (3:9)

the Atlantic. Norwegian territory is vital to NATO for defence of SLOCs between the Europe and the US. For the US her territory is important to project maritime forces to threaten Soviet interests on Kola and northern waters. Arms control increases the importance of Norwegian territory.

Norwegian Defence and security policy

The Norwegian defence and security policies are founded on deterrence and reassurance. A strong national defence and membership in NATO are the deterrent components and a series of self-imposed constraints are the reassurance policy towards the Soviet Union. Norway's strategic position, close to the Soviet important Kola (fig 1) bases and in a favorable position from which to defend the Atlantic, has made it necessary for Norway to establish a strong defence, and at the same time not be considered a threat to Soviet interests in northern areas. New technology has made it possible for the USSR to deploy their strategic naval forces in northern waters and still reach most of the targets in the US and Europe (3:7,22). The Norwegian territory is therefore important for both parties in connection with warning and ballistic missile defence. For NATO, Norwegian territory is important for the defence of Europe and for the USSR as a forward base for control of the Norwegian sea and for denying NATO the advantage Norwegian territory offers.

Soviet build up of the North Fleet to a power projection force has become a severe threat to the Sea Lines of Communication (SLOC) between the USA and Europe. Soviet and NATO efforts in building up strong conventional forces and NATO's strategy of Flexible Response indicate that nuclear weapons are a last resort and hence a prolonged war is likely. A prolonged war increases the importance of the SLOC. SLOC are vital for NATO to supply forces in Europe and reinforcing the European battlefield in a

prolonged war with the Warsaw Pact. The US maritime strategy with forward defence as a response to the Soviet threat to the SLOC has increased the Allied Naval presence in the Norwegian sea. Norwegian territory is important to both parties. For the USSR the problem is to intercept the SLOC and project its naval force further south in the Atlantic. On the other hand, NATO must defend the SLOC and fight the Soviet Union at its own territory.

The increased strategic importance of the Norwegian territory and the Soviet North Fleet buildup to a power projection force has increased the importance of the deterrent component of the Norwegian security policy.

Norway's defence policy is developed to ensure a lowest possible tension level in North-Europe. The political situation and considerations made in her neighbor countries, the Soviet Union, Finland, Sweden and Denmark have been important factors when developing Norway's defence policy. In this process it has been important for Norway to insure the Soviet Union that her defence policy and NATO membership are strictly defensive and not aggressive. The Norwegian assurance policy encompasses self imposed restrictions with roots back to the foundation of NATO and include the base policy, the nuclear policy, chemical weapons and military exercises (4:25-27).

Norway will not, as long as not under attack or under threat of attack, open her territory for foreign bases or troops. Under the same conditions, Norway would not allow nuclear weapons to be stationed on her territory. The same restrictions as for nuclear

weapons applie for chemical weapons, but Norway advocates strongly a formal agreement prohibiting development, production and storage of chemical weapons (4:52).



Figure 2: Map of the Nordic countries

No joint allied exercises will take place in Finmark, which is the Norwegian county that shares a border with the Soviet Union, and no allied flying is allowed on Norwegian territory east of longitude 24 East (fig 2). Naval forces are not permitted east of this longitude (4:52). Norwegian reassurance policy is a self imposed restriction and not negotiable. Consequently Norway decides the content herself. Norway has been very careful not to define the base policy, but rather to outline what activities do not conflict with the policy. This offers room for change without violating the base policy, as the European and the superpowers security policies evolve.

In Stortingsmelding no 54 (Defence Guidance 1989-1993), it is stressed that the base policy does not prevent:

- establishing of bases for allied forces when NATO is under threat of attack or attacked
- contingency planning for allied forces
- building infrastructure to receive and support allied forces
- joint exercises or visits by allies air and naval forces in peacetime
- allied troops staying in Norway in connection with exercises
- establishment of C3I (Command Control Communications Information) installations
- prepositioning of equipment, ammunition, fuel and other supply for allied reinforcements

- participation in NATO integrated C3I system including transfer of air defence forces to NATO operational command in peacetime (4:25)

The importance of Norway's territory for NATO to control the Atlantic, and for the Soviet Union to operate in the Atlantic and secure its vital interests in northern waters and on Kola, are decisive factors for Norwegian security policy.

The North Atlantic Council realizes its responsibility to encourage the ongoing democratization process in Eastern Europe, and has agreed on a common action plan which will encourage democracy in Eastern Europe and especially work for contact between people in the two blocs. Economic cooperation and trade with the Eastern European countries are considered important and transfer of technology should be a part of this program. Ecology, terrorism and narcotics are areas of special interest in which it is important to cooperate with Eastern Europe. Knowledge of each others culture is essential for understanding and respect between the two parties, and study programs on western universities on the Soviet Union and the East block will be encouraged (18:31). These programs would not effect Norwegian security policy, but closer corporation with, and better knowledge of Eastern European countries would create a secure and stable situation in Norway as well.

Strategic Nuclear Forces

Strategic nuclear forces encompass Strategic delivery vehicles - Inter Continental Ballistic Missiles (ICBM's), Sea Launched Ballistic Missiles (SLBM's) and heavy bombers, and strategic warheads - ICBM's, SLBM's, SLCM's and Air Launched Missiles (ALM's) and Air Launched Cruise Missiles (ALCM's).

The principle of a 50 percent reduction was agreed at the summit meeting at Reykjavik in October 1986. Negotiations between the USA and the Soviet Union have, since then, solved many of the difficult questions but some important issues are still unsolved. The areas of agreement reached by summer 1989 are (6:7):

- a limit of 1,600 on both sides of strategic delivery vehicles
- a ceiling of 6,000 strategic warheads
- a sub-limit of 4,900 ICBM and SLBM warheads, within the ceiling of 6,000
- a sub-limit of 1,540 warheads on 154 heavy missiles
- a 50 percent reduction in the aggregate throw weight
- counting each heavy bomber as one strategic delivery vehicle and one warhead
- eventually limit the nuclear-armed SLCM's."

The areas of disagreement are how to deal with: (6:7)

- the ABM treaty and SDI
- counting rules for SLCM
- verification

The number of the post treaty strategic nuclear forces will not be decisive for deterrence stability. A survivable force with

1,500 to 2,000 warheads would have sufficient retaliatory capabilities (7:9), hence the proposed 6,000 warheads will allow both sides enough surviving warheads. Consequently the lower the number, the more important will the survivability for each vehicle and warhead be.

The reduction from 1,986 to 1,600 delivery vehicles for the US and from 2,492 to 1,600 for the Soviet Union, and a sub limit of 4,900 ICBM and SLBM warheads, are not dramatic reductions, but survivability will have to be emphasized (6:7). A second strike capability must be maintained, which means that a first strike from one of the parties must not destroy so many vehicles of the other part that he loses his ability to strike back and cause unacceptable destruction. Norway's interest in START negotiations should be to keep the strategic nuclear arsenals on both parties at a level so survivability of the forces does not become the key question. Sea launched Ballistic Missiles are probably the most survivable strategic force. A relative shift to more SLBMs will increase the importance of northern waters and make Norwegian territory more important for the Soviet defending her sea launched strategic force.

Despite new technology and increased capabilities to detect submarines a submarine is still difficult to detect and destroy. In the polar region ice cover and drifting ice would to a great extent degrade the ability of airborne and surface ships to hunt submarines, thus the main threat to the Soviet strategic submarine force will be the US attack submarine. This makes the Soviet

strategic submarines in the northern area even more difficult to detect and destroy.

SLBMs can reach targets in North America , Western Europe and China from patrol stations in the Arctic (fig 4).

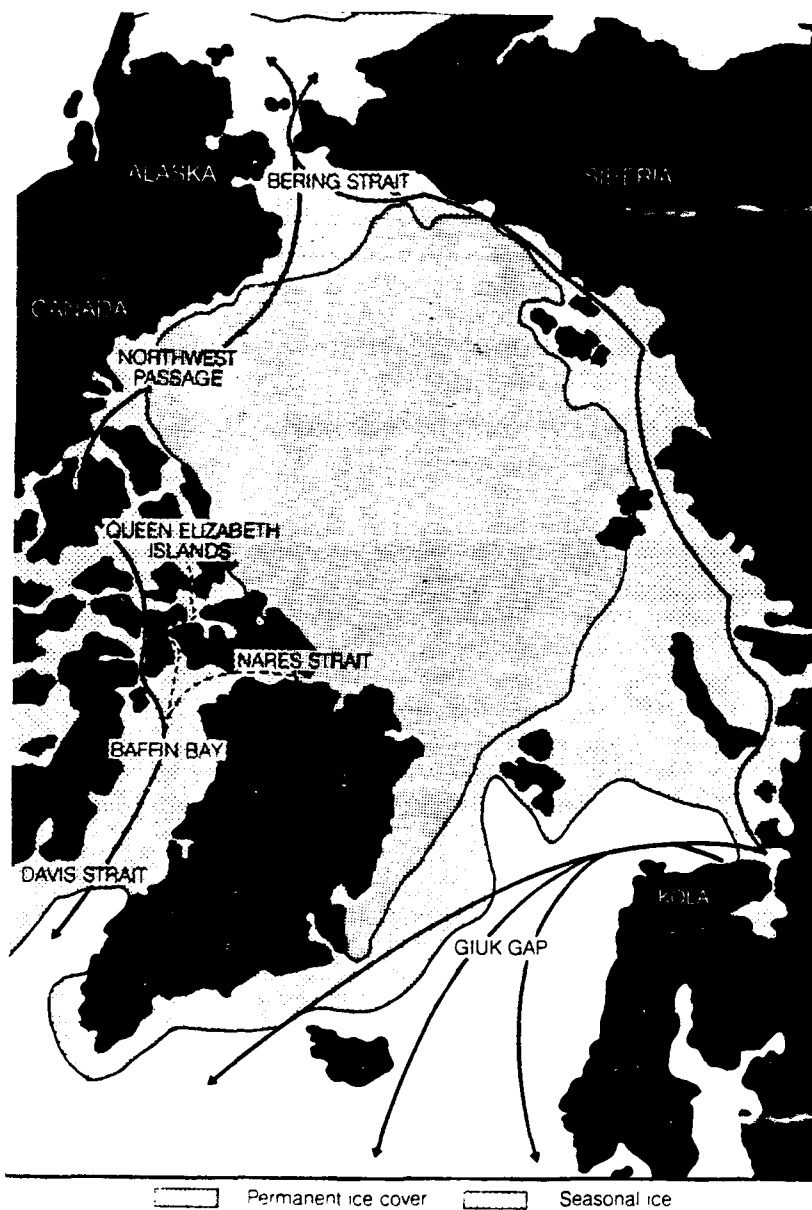


Figure 3: Northern Waters: ice cover and exits (3:4)

The high survivability and the effective deployment area in the

polar region, will most likely result in an increased portion of the Soviet strategic force of SSNs in northern waters. The strategic position of northern waters and Norwegian territory will increase, and consequently Norwegian security policy will be effected. The Norwegian territory is important to NATO for support of naval ASW forces and basing of long range ASW aircraft. For the Soviet Union it is important to deny NATO the advantage Norwegian territory gives and for defence of her vital interests in northern waters.

Both US and Soviet nuclear land attack SLCMs have ranges estimated to 3,000 km. SLCM's can not hit important targets in Central Europe and the US from arctic deployments.

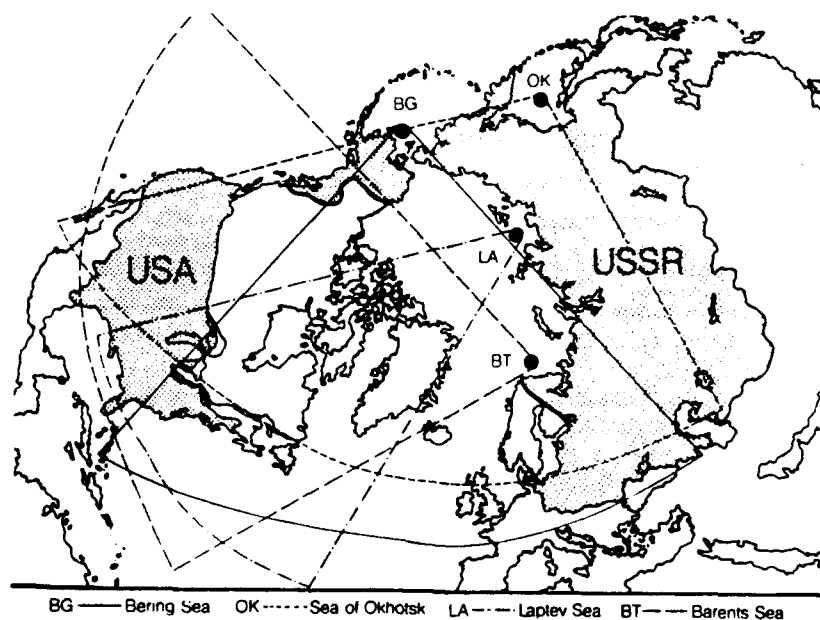


Figure 4: Areas within 3,000 km range from USSR northern coastal area (3:23).

Development of long range SLCM's could change this but for the near future Soviet naval forces have to take position in the Atlantic to threaten Central Europe and the US. In this scenario the Soviet naval strategic nuclear forces have long and vulnerable support and supply lines. Norwegian territory would be important for the Soviet Union for air bases and logistic bases to support operations in the Atlantic, and hence important for the US to deny the Soviet the advantage the Norwegian territory offers.

Survivability of land based missiles can be increased by mobility in combination with a high number of concealed deployment positions. This will make it difficult to know exactly where the vehicles are. The Soviets have already deployed ICBM's after this concept. The US has opposed mobile land-based mobile ICBM's, but in September 1989 the US President announced the decision to allow mobile land-based missiles in START (1:13). Another method is to increase the fortification for the stationary missiles. However, the CEPs (Central Error Probability) for the latest generation strategic missile are so small and the probability of kill when hit are so high, that hardening does not appear to be a cost effective solution.

Norway is in the line of strategic bomber force and ICBM's in a nuclear war between the US and the Soviet Union (fig 4). Norwegian territory for BMD (Ballistic Missile Defences) and ground based radars for warning and BMD are important, especially for the Soviet Union to create depth for her defence against polar trajectory strategic nuclear forces (3:6).

The Soviet increased interest in Norwegian territory and in hindering NATO using Norwegian territory will effect the Norwegian defence and the alliance effort to defend Norway. The Norwegian Base policy is a severe constraint defending Norway (8:17). The more important Norwegian territory becomes, the more likely it is that NATO will put pressure on Norway to allow foreign troops on her territory in peacetime.

Theater Based Nuclear Forces

Theater based nuclear forces are an important part of the alliance deterrent and ensure that the Soviet Union never will doubt NATO's strategy of flexible response. According to General John R. Galvin, survivable and responsive Europe based nuclear forces will complicate Warsaw Pact planning and make it impossible to predict how the West will react to aggression (10:25). The NATO protocol from the North Atlantic Council 29-30 May 1989 states that the alliance goal is to keep theater nuclear force on a lowest possible level necessary for deterrence. The alliance supports a verifiable reduction of US and Soviet theater force to an equal level. As a first step the Soviet Union should unilaterally reduce its theater nuclear forces to existing level of NATO's integrated forces (9:26). Reductions in theater nuclear forces should be carefully coordinated with CFE. A successful conclusion of the CFE, eliminating forces suitable for surprise or mobilized attack by Soviet forces, will create a basis for reduction and later a possible elimination of theater nuclear forces. Norway favors an elimination of theater nuclear forces in Europe, as the possibilities of an accidental escalation of a conflict would be less (11:74).

The effects on Norwegian security policy will be indirect since the reduction or elimination of theater nuclear forces will further increase the importance of a survivable strategic nuclear force, and consequently, the importance of naval nuclear forces in northern waters would relatively increase. Increased activity in

northern waters and also increased importance of northern waters will effect Norway and her security policy. The size of the defence component of her security policy could have to be increased. The result could be that Norway's defence expenditure will increase, the Norwegian base policy could be put under pressure to allow foreign troops be stationed in Norway in peacetime, or NATO will decide that in spite of the increased risk the risk is acceptable.

A reduction of theater nuclear forces in Europe will create a more secure Europe and Norway should be prepared to take her responsibility created by a relative shift in allied defence focus from Central Europe to Norway and northern waters. An increased allied presence in Norway could question the Norwegian Base policy and make the Soviet Union put pressure on Norway to refrain from taking necessary actions. One way for Norway to avoid a situation like this is to make these questions a part of the arms control agenda so the ratio of IBM's, SLBM's and air borne deterrence forces remain unchanged. This will avoid a shift of focus from land based nuclear forces in the Central Europe to naval nuclear forces in the northern region.

Conventional Forces

Conventional arms control involves two different negotiation forums the Conference on Security and Cooperation in Europe (CSCE) and the CFE.

The 35 nations involved in CSCE are all European countries except Albania, plus the United States and Canada. The CSCE is a continuous process. The Helsinki Act 1975, deals with principles for relation between states including notification of military exercises involving more than 25,000 men and also the principles of inviting observers from CSCE participants to those exercises. Another CSCE forum is the conference on disarmament in Europe (CDE), which was launched in Stockholm in 1984 and resulted in the Stockholm Document in 1986. This document encompasses a series of notification and verification issues in accordance with exercises. Big exercises involving more than 40,000 men should be notified 2 years in advance (9:235). The third CSCE follow up meeting started in Vienna in 1986 and concluded in January 1989. The future meeting is scheduled for Helsinki in March 1992. The CSCE agenda encompasses cooperation in the humanitarian field and proposes standards for humanitarian rights, dissemination of information, and cultural and educational cooperation.

The CFE involves the 23 NATO and Warsaw Pact members dealing with arms reduction. A statement from the 1989 summit at the North Atlantic meeting in Brussels 29 and 30 May 1989, stresses that a balanced conventional force on a lower level in Europe is, together with a greater openness, the basis for the CFE (9:441).

NATO's agreed objectives for conventional force negotiations are in summary:

- reduction of the total amounts of forces in Europe, with emphasis on the most threatening forces e.g. forces for seizing and holding terrain.
- a limit on the percentage one country can hold of the total arms allowed
- a limit on stationed forces in one country
- limitations on forces should apply for all Europe at the same time from the Atlantic to the Urals (9:441).

Concerning the negotiations on security and confidence building measures, the alliance agreed on the following principals:

- transparency of force structure
- transparency and predictability of military activities
- close contacts and open communication lines between the two parties (9:441).

The Alliance welcomed the progress in the CSBM negotiations including the agreement to hold a military doctrine seminar early 1990 (13:12).

The Alliance arms control policy is to ensure security and stability in Europe. For CFE, elimination of Soviet capability for surprise attack and massive attack is a main goal (9:26). Forces that could seize and hold terrain are important to reduce to obtain this goal. These forces are often referred to as main battle tanks, artillery and armored fighting vehicles. In addition

ground attack aircraft, attack helicopters, surface-to-surface missiles, tactical bridging systems and vehicles for clearing mine fields are cited candidates for reduction (14:112).

On December 7, 1987 General Secretary Gorbachev announced that the USSR was willing to reduce its armed forces with 500,000 men and 6 tank divisions from Eastern Europe. The effect of these reductions east of the Urals would be a reduction of 10,000 tanks, 8,500 artillery systems and 800 combat assault landing formations. After the reduction the Warsaw Pact would continue to outnumber NATO 2.5:1 in tanks, 2.4:1 in artillery and nearly 2:1 in combat aircraft (14:99). If more than 3 to 4 divisions are reduced NATO will probably not be able to afford to maintain minimum forces deployed on its 755 km long front without jeopardizing its defence (15:78).

A reduction of the total armament in Europe to a sufficient level for defence and a roughly equal strength on both sides will stabilize the situation in Europe and in Norway. Norway has only a very small number of battle tanks, artillery and armored fighting vehicles and a reduction of these forces would severely effect Norway's minimum defence (16:7). It is therefore important for Norway that the reduction talks encompass the Barents Sea to the Mediterranean as well as the Atlantic to the Urals. A division of the NATO alliance into sectors could very easily destroy the capabilities in Norway where a small reduction will bring the number under the minimum required to obtain a reasonable deterrence and defence effect. Hence a division in sectors could

open up the possibility of moving forces from one sector to another. In the situation described above allied forces could be moved from Central to North Europe to restore a deterrence and defence capability. This situation could put pressure on Norwegian Base policy, to allow foreign forces to be stationed on her territory in peace time. A move away from the Base policy could signal to the Soviet Union to increase its capability, and an arms competition and arms escalation would be the result. The arguments are valid the other way also. The Soviets could move parts of their reduced forces in Central Europe to the Northern Sector, and a reinforcement of the Norwegian deterrence and defence forces could be the result, which again will challenge the Norwegian base policy and result in a climate for arms competition and arms escalation.

The NATO alliance proposal that no nation could possess more than an agreed percentage of the total force would avoid a concentration of force in one country and in that way obtain a breakthrough capability in the area. "For example, the two sides would have 40,000 tanks combined; then no country could have more than 30 percent of 40,000 or 12,000 tanks" (15:79). This would not effect Norway, but it would stabilize the situation in Europe and avoid specific high threat areas.

NATO also proposes limitations on stationed forces and weapons of one nation stationed in another country (15:79). This means that the Soviet Union could only station an agreed percentage of its attack forces in another country, and hence

surprise attack will be less likely in that area. The ongoing democratization process in Eastern Europe will increase the Soviet withdrawal of troops from other nations. Hungary has demanded all Soviet Troops out of her territory, and an agreement has been reached with the Soviet Union to complete the withdrawal of all Soviet troops by end 1993. Other Eastern European countries will probably follow the Hungarian example. This will bring more Soviet Troops to the Soviet Union than proposed under the arms control negotiations. An arms cut of these proportions could have serious effect on the Soviet economy. Deployment of some of this forces to the Kola Peninsula is a possibility. Some will argue that a cut in Soviet defence forces will help the Soviet economy, but it should be recognized that the military directed Soviet industry needs time to be converted to civilian production. In this scenario a build up of forces on Kola would be argued as a measure to fight inevitable unemployment and should not be considered a threat to Norway. However, when evaluating her security, Norway would have to consider the fact that the forces would be there and not the intentions which very easily could be changed. Another effect is that a temporary build up of military infrastructure on Kola could turn out permanent as it could be difficult to establish other industry in this area to generate employment for the people.

The effect of the NATO proposal to limit forces in another country and the forced withdrawal of Soviet forces from some Warsaw Pact countries could lead to a build up of forces on Kola

and seriously effect the Norwegian security and her security policy:

For NATO the proposal means that US personnel, and to some degree weapon systems, will have to be withdrawn to the US. In case of conflict, the Soviet Union could reinforce the European battlefield over land and would reach the combat zone earlier and on a safer route than US forces travelling by air and sea. With transparent force deployment, reasonable warning time of 30-45 days to bring US forces to Europe should be expected. In this scenario the US and NATO political decision processes would be vital for a timely reinforcement of Europe. By far the most important transportation means to ensure sustained operations would be ships, and the SLOC would be vital for US support and the outcome of a war in Europe.

US maritime strategy is based on forward deployment to threaten the Soviet strategic missile submarines (SSBN) and the Soviet navy home port on Kola. This strategy is supposed to force the Soviet attack submarines to defend the SSBNs and Kola instead of engaging the SLOC (17:315). Forward defence is considered to be the most effective way to defend the SLOC with limited forces. Deploying navy ships for defence of the SLOC would require a high number of naval forces. Convoying would restrain the transport capacity and would in the long run put a too heavy toll on the escorting force. The forward deployment strategy would increase the activity in northern waters. Norwegian territory would be important for supply bases to NATO naval forces in northern waters

and for air bases to achieve air superiority. A defensive strategy in the Atlantic would allow the Soviet navy to operate in the Norwegian Sea and out to the Atlantic. Soviet naval forces would be between the US naval forces and Norway, and defence of Norway would be very difficult. Soviet control of Norway would improve the operational capability of the Soviet naval forces in the Atlantic and would be a severe threat to the SLOCs. Norwegian territory is considered vital for defence of SLOCs and Norway under Soviet control is likely to escalate the war.

A reduction of US forces in Europe would increase the importance of SLOCs to transport US reinforcements to Europe. The more important secure and open SLOCs become, the more important Norwegian territory will be for NATO to defend the SLOCs and for the Soviets to attack the SLOCs. This increase in the strategic importance of Norway would effect Norwegian security policy. An increased Soviet threat to Norway and a higher value of Norwegian territory to NATO could put pressure on Norwegian base policy and if changed, could be a cause for arms competition in the Northern Region. Norway should meet this challenge at the negotiating table in Vienna. One solution to the problem would be to put the threat to the SLOC on the CFE agenda.

Chemical Weapons

Multilateral negotiations on chemical weapons have been on the agenda at the Geneva Conference of Disarmament since early 1980's. In 1989, 149 nations agreed on an early banning of development, production, stockpiling and use of chemical weapons (19:209). A reduction or ban of chemical weapons would have limited effect on Norwegian Security policy. Chemical weapons are easy to produce, and a legitimate civilian factory could be switched to produce toxic chemical agent in 12 hours (19:215). Consequently, within a short time chemical weapons would be available for use. The precautions Norway must take to defend itself against chemical weapons would have to be carried on in spite of a ban on chemical weapons. A ban of chemical weapons would, however, make an early use in a conflict less likely. Using chemical weapons would then be considered an escalation, and a nuclear response has to be considered a possibility.

Naval Forces

Naval forces are not on the arms control agenda today, but keeping the naval forces out of the agenda is not very likely to happen. During a recent visit to the US, Marshal Sergei Akhromeyev said: "Moscow might not sign any agreement reducing conventional forces in Europe unless the US agrees to open talks on reducing its naval forces" (20:8). This indicates that the Soviets strongly favor naval arms control. A Soviet proposal on naval arms control would probably be very difficult for NATO to refuse. Public opinion in NATO countries would probably be in favor of a Soviet proposal of naval arms control and NATO reluctance could create a debate on security policy which could disrupt today cohesion in NATO.

Naval forces with their great mobility tend to be global forces more than local forces which make them difficult to introduce into the CFE negotiations. One goal with arms control is to increase stability in Europe. Reduction of naval forces to an equal level will not support this goal. NATO communication lines are primarily naval in contrast to Warsaw Pact communication lines which are continental. Naval forces also create depth in defence against sea threat for most of the NATO alliance, while the Soviet Union has less requirement for depth against a sea threat. Realizing the depth naval forces offer and that a major part of the US reinforcement to NATO travels by ships from the Gulf of Mexico to Europe, while the Soviet reinforcement to a European front travels over land, a symmetric reduction of naval

forces would result in a highly asymmetric affect.

Discussing arms control on naval forces, it is important to consider that the US Navy is not only, and perhaps not primarily, a force in the East-West balance but an important political means to secure US interests around the globe. This should not exclude naval forces from arms control but the agenda should reflect components of naval forces threatening US and Soviet vital interests rather than naval forces in general.

What naval forces should be part of the agenda? Survivable strategic nuclear forces are vital to both superpowers. The SLBMs are one important part of the deterrence forces. Ice conditions in the Arctic make Anti Submarine Warfare (ASW) difficult by surface ships and long range aircraft. Hence the most serious threats to Soviet SSBN in northern waters are NATO attack submarines. The most serious threats to the NATO SLOCs are the Soviet attack submarines and long range naval aircraft (14:75). NATO and Soviet attack submarines are equipped with long range Sea Launched Cruise Missiles (SLCM) against targets on land. NATO SLCMs are a serious threat to vital Soviet bases on Kola and Soviet SLCMs are a serious threat to bases in NATO countries (3:44). From positions in northern waters, SLCM can threaten bases in Norway. Moreover, ocean going submarines operating in the Atlantic and the Mediterranean threaten vital targets in every NATO country, including the US and Canada.

It is in the interest of both NATO and the USSR to reduce the threat from attack submarines. A beginning could be to limit the

number of attack submarines to the number needed to defend their strategic missile submarines. In this way one of the most serious threats to the SLOC would be reduced. Reduction of the threat to the NATO SLOC would reduce the importance of Norwegian territory and northern waters, and hence Norwegian base and security policies could stay unchallenged.

The INF treaty bans land based intermediate nuclear weapons including cruise missiles. SLCM's are a part of the START negotiations but disagreement on counting rules and difficult and unsolved means for verification make the outcome of the SLCM negotiations very uncertain. Today the US has a mix of conventional and nuclear armed long range SLCM's, while the Soviet Union has deployed nuclear armed SLCM's. Both parties have programs for further deployment of long range conventional and nuclear SLCM's (3:42)

Under the START treaty a 50 percent reduction of strategic missiles could mean a reduction of SLBMs and missiles submarines. Norway fears that a shift from land based to sea based INF can lead to a rearmament of those submarines with SLCM's (3:42). SLCM's are also a direct treat to Norway and other sea border states in NATO. However, it is encouraging that the superpowers have expressed that they would work the subject to find acceptable solutions for both parties (3:42).

It should be in the interest of both superpowers to put attack submarines and long range SLCMs on the agenda. A reduction of attack submarines and SLCM's would reduce the threat

to the SLOC and also the direct threat to Norway which again would leave the Norwegian security policy unchallenged.

Conclusion

Arms control effects Norway's security policy by increasing the strategic importance of her territory and by decreasing the capability of the Soviet to launch a surprise attack.

Reduction in strategic nuclear forces increases the importance of those forces. Northern waters offer the Soviet Union a secure deployment area, which could lead to a relative shift to sea based strategic forces. Increased activity in northern waters would effect Norway and her security policy as her territory becomes important. For the Soviet Union, Norwegian territory is important to defend her sea based strategic nuclear forces and naval bases on the Kola Peninsula. For NATO, Norwegian territory is important to threaten the Soviet sea based strategic nuclear forces in northern waters and naval bases on Kola.

The reduction of theater nuclear forces will further increase the importance of a survivable strategic nuclear force which again will increase the activity in northern waters. This will further increase the strategic position of Norwegian territory and effect her security policy.

Reduction in conventional forces to a lower and balanced level, would probably make a future conflict a prolonged conflict. The outcome of a prolonged war in Europe will be dependent of open and secure SLOCs between the US and Europe. Reduction of American standing forces in Europe will increase the demand of transfer of personnel and equipment to Europe in case of a conflict. A major part of the forces will have to be shipped by

sea. Norwegian territory will be vital for NATO to defend the SLOCs and also for the Soviet Union to project naval forces to the Atlantic and threaten the SLOCs.

Arms control to a lower level and military forces transparency will reduce the surprise attack capability. A longer warning time should be expected. Longer warning time will open the possibility for Norway to reduce her standing forces and alert status of some of her remaining standing forces. Peace time military activity should be prioritized to build up and maintain an effective mobilization force.

The ongoing democratization process in the Soviet Union and the Warsaw Pact countries will reduce the threat to NATO. However, the possibility that the activity on the Kola Peninsula and northern waters relatively increases makes Norwegian territory, and in particular North-Norway, more important to the Soviet Union. Hence, a relative shift in priority of Norwegian defence policy from South-Norway to North-Norway should be considered.

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GLOSSARY

ALM	Air Launched Missile
BMEWS	Ballistic MISSILE Early Warning System
CFE	Conventional Force Europe
C3I	Command Control Communications and Information
CEP	Central Error Probability
CSCE	Conference in Security and Cooperation in Europe
• ICBM	Inter Continental Ballistic Missile
INF	Intermediate Nuclear Force
SLBM	Sea Launched Ballistic Missile
CSBM	Confidence and Security Building Measures
SLCM	Sea Launched Cruise Missile
SLOC	Sea Lines of Communication
SSBN	Strategic Missile Submarine
START	Strategic Arms Reduction Talks